



# ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: CF6-45A2 BYPASS RATIO: 4.3  
 UNIQUE ID NUMBER: 3GE068 PRESSURE RATIO ( $\pi_{00}$ ): 25.4  
 COMBUSTOR: Low emissions fuel nozzle  
 ENGINE TYPE: TF RATED THRUST ( $F_{00}$ ) (kN): 202.8

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
D <sub>p</sub> /F <sub>00</sub> (g/kN) or SN	6.0	42.3	52.0	16.1
AS % OF ORIGINAL LIMIT	30.6	35.8	57.3	82.6
AS % OF CAEP/2 LIMIT (NO <sub>x</sub> )			71.6	
AS % OF CAEP/4 LIMIT (NO <sub>x</sub> )			87.2	
AS % OF CAEP/6 LIMIT (NO <sub>x</sub> )			99.1	
AS % OF CAEP/8 LIMIT (NO <sub>x</sub> )			119.2	

### DATA STATUS

- PRE-REGULATION  
 x CERTIFICATION  
 - REVISED (SEE REMARKS)

### TEST ENGINE STATUS

x NEWLY MANUFACTURED ENGINES  
 - DEDICATED ENGINES TO PRODUCTION STANDARD  
 - OTHER (SEE REMARKS)

### EMISSIONS STATUS

x DATA CORRECTED TO REFERENCE  
 (ANNEX 16 VOLUME II)

### CURRENT ENGINE STATUS

(IN PRODUCTION, IN SERVICE UNLESS OTHERWISE NOTED)  
 x OUT OF PRODUCTION (DATE: - )  
 - OUT OF SERVICE (DATE: - )

### MEASURED DATA

MODE	POWER SETTING (%F <sub>00</sub> )	TIME (minutes)	FUEL FLOW (kg/s)	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NO <sub>x</sub>	
TAKE-OFF	100	0.7	2.027	0.09	0.43	25.45	11.6
CLIMB OUT	85	2.2	1.663	0.14	0.54	21.61	12.0
APPROACH	30	4.0	0.592	0.35	5.01	9.36	1.3
IDLE	7	26.0	0.163	2.72	24.04	3.40	1.4
LTO TOTAL FUEL (kg) or EMISSIONS (g)			701	780	6980	9105	-
NUMBER OF ENGINES				1	1	1	1
NUMBER OF TESTS				3	3	3	3
AVERAGE D <sub>p</sub> /F <sub>00</sub> (g/kN) or AVERAGE SN (MAX)				3.9	34.4	44.9	12.5
SIGMA (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)				0.1	0.6	2.9	1.8
RANGE (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)				3.76-4.04	33.9-34.38	42.69-48.24	10.68-14

### ACCESSORY LOADS

POWER EXTRACTION 0 (kW) AT - POWER SETTINGS  
 STAGE BLEED 0 (% CORE FLOW) AT - POWER SETTINGS

### ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	97.7-97.9
TEMPERATURE (K)	292.3-301.3
ABS HUMIDITY (kg/kg)	0.0127-0.0216

### FUEL

SPEC	Jet A
H/C	1.94
AROM (%)	16.3

MANUFACTURER: General Electric Company  
 TEST ORGANIZATION: GE Development/Production Test Operation  
 TEST LOCATION: Site IVD, Peebles, Ohio  
 TEST DATES: 28/07/1987-29/07/1987

### REMARKS

1. Engine equipped with low emissions fuel nozzle config.
2. GE Report R87AEB559.
3. Engine 530375/001.
4. Idle emissions calculated at normal idle setting rather than 7%.

Compliance with Fuel Venting requirements: - ('x' if complies, 'PR' if pre-regulation, '-' if information is not available)